EXHIBIT I-A

IN THE
UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

UNITED STATES OF AMERICA, Plaintiff, v. ALFRED WASHINGTON, Defendant.	)	No. 12-CR-632 Chief Judge Rubén Castillo

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UNITED STATES OF AMERICA, Plaintiff, v. JOHN T. HUMMONS, Defendant.	)	No. 12-CR-887 Chief Judge Rubén Castillo

REPORT OF JEFFREY FAGAN, Ph.D.

I. OVERVIEW

A. Qualifications

I am the Isidor and Seville Sulzbacher Professor of Law at Columbia Law School and Professor of Epidemiology at the Mailman School of Public Health at Columbia University. I also am a Senior Research Scholar at Yale Law School. I have been retained to serve as an expert witness for defendants' selective prosecution/enforcement claim in this case. A summary of my credentials and curriculum vitae is presented in Appendix G.

B. Issues Addressed

In this Report, I provide empirical evidence to address two principal claims by defendants in these cases.

- Defendants claim that the Bureau of Alcohol, Tobacco, Firearms and Explosives (hereafter, law enforcement or ATF) targeted Black and Hispanic people for recruitment into fictitious "Stash House stings," in violation of the equal protection principles of the Fifth Amendment.
- Defendants also claim that, in targeting Black and Hispanic people for recruitment into fictitious "Stash House stings," the ATF recruited persons based on criteria and characteristics that were not specified as selection criteria articulated in the ATF Manual for this program.

C. Summary of Findings

- From 2006-2013, the probability of selection of a cohort of Stash House Program defendants with their observed racial and ethnic composition from among a large pool of similarly situated potential eligibles is less than 0.1% for the 94 defendants in these cases.
- ATF engaged in nearly exclusive recruitment of non-White persons over a three-year period from 2011-2013. From 2011-2013, the selection of only one White defendant among the 57 Stash House defendants recruited in that period suggests that Black and Hispanic persons were targeted for selection by the ATF. The probability of selecting a cohort of 56 non-White defendants out of 57 from among potential eligibles is less than 0.1%. These extremely low probabilities provide evidence of race-based selection of Stash House defendants.
- Large numbers of Stash House defendants were recruited into the Stash House Program without having met the explicit criteria of violent crime set forth in ATF policy and guidelines.[1] Many defendants also appear to fail to meet expanded offense criteria articulated by the ATF and prosecutors during the course of this litigation.
- Using three distinct statistical tests for disparate racial treatment, there is strong, consistent and statistically significant evidence that non-White suspects were more likely than White suspects to be targeted for recruitment into the Stash House Program, compared to a large population of similarly situated and matched potentially eligible persons with one or more prior convictions for any of the ATF target offenses. Non-White persons were more likely to be recruited into the

[1] The ATF has stated the violent crime criteria as: "Violent crime is defined as offenses that involve force or threat of force and includes murder, forcible rape, robbery, aggravated assault, and arson." ATF Manual at A-31 (reprinting ATF O 3250.1B.b), *see infra* notes 7, 8.

Stash House Program after controlling for criminal histories relevant to the Stash House Program policies.

- The results of these tests show a pattern of selective enforcement in the recruitment of Stash House defendants. The results show that after controlling for the ATF criteria as well as several indicia of criminal propensity, race remains a statistically significant predictor of selection as a Stash House defendant. These analyses show that the ATF is discriminating on the basis of race in selecting Stash House defendants. In other words, Black status is a significant predictor of selection as a Stash House defendant after controlling for both formal and informal but articulated ATF criteria.

II. DATA AND MEASURES

This preliminary section describes the empirical foundations of the statistical analyses presented in this Report. This section describes the data sources and analytic methods that were used to compile evidence to address the claims in this case. There are two components to this section:

A. A description of the data sources that are used to characterize the defendants and potential eligibles in the Stash House cases.

B. A description of the measures that are used to assess the characteristics of the population that, after applying the ATF criteria, were potentially eligible for selection as Stash House defendants.

A. Data Sources – Defendants and Potential Eligibles

The sources of data used in the analyses are shown in Appendix A. These are described in the following sections.

1. Defendants

There were 24 cases with a total of 94 defendants charged between 2006 and 2013. Criminal history records were obtained and coded for each of the defendants across the cases analyzed for this Report. The criminal histories were in the form of "rap sheets" showing each arrest and conviction, with detailed information about the charges and dispositions in each case. Both the statute and generic description of each offense were listed for each offense. Since cases or arrest events often included multiple charges, all

charges were coded for analysis.[2] The type of sentence was coded, as was whether the defendant was sentenced to jail or prison.[3] Both the arrest charge(s) and final conviction charge(s), for those found or pleading guilty, were coded. Dispositions were reported, as were sentences for those convicted.[4]

Access also was granted to the Complaints filed in each case (which were used to determine the dates of the beginning and end of each Stash House investigation), Investigative Memoranda, and ATF "takedown memos" describing the details of each group of defendants who participated in a specific event.[5] These records together provide narrative descriptions of the criminal histories, recruitment, and other relevant information about the defendants in each case. These records also include the details of the recruitment of those recruited to carry out the fake Stash House robberies.

Race/ethnicity, gender, and year of birth also were coded from the rap sheets. Age at the beginning of each year 2006-2013 was computed from the year of birth. Arresting law enforcement agency was coded. Since most arrests took place in Chicago, the agency variable was limited to a binary measure of whether the arrest was made by the Chicago Police Department or another law enforcement agency. Specific location data (address), either for the location of the arrest or for the residence of the defendant at the time of arrest, was coded where available. However, the data were not available in most rap sheets. The extensive missing data on location made geographic analyses impossible at this point.

2. *Eligible Population*

To create a population of similarly situated persons (a comparison group), complete criminal history records of all persons with at least one prior conviction for certain offenses between 2000 and 2015 were obtained via subpoena from the Illinois State

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[2] Details are provided in Appendix D. The categorization by crime type followed the crime aggregation and reporting systems developed by the Federal Bureau of Investigation (FBI) in its Uniform Crime Reporting System (UCR). For a listing by the FBI of the full range of offense definitions *see* https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2011/crime-in-the-u.s.-2011/offense-definitions.

[3] The custodial data provided by ISP had extensive missing records and incomplete information on custodial stays, precluding any analysis utilizing custodial stay length.

[4] Sentences were coded in order of severity, with a prison sentence superseding a concurrent jail sentence (e.g., a sentence to 6 months with time served in jail and a one year prison sentence is recorded as one prison sentence).

[5] *See* ATF Manual at A-35 – A-37 (reprinting ATF O 3250.1B.g) describing the purpose and content of these memos and the importance they play in the stash house investigation process. *See infra* notes 7, 8.

Police (ISP).[6] The parameters for the requested convictions were derived initially from the target offenses listed in the ATF Home Invasions Operations Manual.[7] According to the ATF Manual, these target offenses were "offenses that involve force or threat of force and includes (sic) murder, forcible rape, robbery, aggravated assault, and arson."[8] The sample parameters for the requested data were derived initially from the target offenses listed in the ATF Manual for the Stash House Case Program.[9] Appendix C shows the definitions of eligibility as stated in the ATF Manual.

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[6] Details of the records produced are listed in Appendix B.

[7] It is my understanding from review of discovery that the ATF states its formal selection criteria in a series of regulations, manuals, and training materials. The government produced four sets of ATF documents in discovery: (1) an ATF Home Invasions Operations Manual dated 2013 (hereinafter "ATF Manual"); (2) a policy entitled ATF O 3250.1B dated November 17, 2011; (3) an "*ATF Course*" dated 2009; and (4) an undated policy entitled ATF O 3250.1A from sometime before 2011. This Report relies on the 2013 ATF Manual, which reprints ATF O 3250.1B (the November 17, 2011 policy, which is currently in operation until November 17, 2016), and on the "target identification" criteria set out therein. *See* ATF Manual at A-31 – A-32 and Bates # ATF-Docs(12CR632; 12CR887/00045). The "target identification" portion of the ATF Manual is shown in Appendix C.

The government produced these materials to lawyers for defendants in discovery as follows (Government's in camera submission of December 16, 2013): (1) The 2013 Home Invasions Operations Manual (1st ed. 2013), Bates # ATF-Docs(12CR632; 12CR887/00011–54), includes an appendix that reproduces (2) the 2011 policy, ATF O 3250.1B (Nov. 17, 2011), Bates # ATF-Docs(12CR632; 12CR887/00045–52); (3) the 2009 ATF Course is Richard Zayas, *ATF Course: Advanced Undercover Investigations; Lesson: Home Investigations* (Feb. 27, 2009), Bates # ATF-Docs(12CR632; 12CR887/00069–82), and (4) the undated policy is ATF O 3250.1A, Bates # ATF-Docs(12CR632; 12CR887/00064–67), and was reproduced in the appendix to Lawyers for defendants shared these documents with me under the confidentiality stipulations in effect in this case.

[8] ATF Manual at A-31. This Report relies on the 2011 targeting criteria, even though some of the cases analyzed arose before the date of the policy. All of the ATF Manuals reflect a focus on violent offenders, a focus elaborated most clearly in the 2011 policy. For example, the ATF used very similar targeting criteria in its earlier 2009 "ATF Course" materials. Specifically, the materials focused on "violent offender[s]" with "past convictions for violent crimes." Zayas, *ATF Course* at 5. *See also* ATF O 3250.1A ("'Home Invasion' investigations are defined as those investigations that focus upon members of the criminal element who break into or forcibly enter residences or other facilities generally for the purpose of committing armed robbery or burglary."); ATF Manual at 2 (discussing Stash House Program's origins in the 1990s as "viable means of continuing to arrest violent armed home invasion robbery crews" in South Florida), Bates # ATF-Docs(12CR632; 12CR887/00018).

[9] ATF Manual at A-31.

After this selective enforcement litigation began, the Government also publicly asserted that narcotics and firearms offenses are relevant to target identification.[10] These two categories of offenses are not mentioned by name in the ATF Manual that guides supervisors and undercover agents in the selection and recruitment of individuals for the Stash House Program. They also are not offenses that "involve force or threat of force." This appears on its face to be a post-hoc expansion of the authorized guidelines for the Stash House Program.[11]

To account for the Government's expanded criteria, the pool of potential eligibles was expanded beyond persons with one or more convictions for the target offenses listed in the ATF Manual, to include individuals with one or more state convictions for narcotics and firearms offenses.[12] Expanding the eligible population to include these additional individuals ensures the most "similar" comparison group, according to the government's claims.

Records were requested for the entire Metropolitan Statistical Area of Chicago, but the Court ordered records produced only for the counties where the Stash House cases arose: Cook, Lake, Will, DuPage, Kane, Kendall, LaSalle and Winnebago Counties. This analysis does not consider any potential eligibles after 2013 because no Stash House cases were brought after 2013.

Once the potential eligibles for the Stash House Program were identified using these criteria, their complete criminal history was created through a search of the ISP databases. In addition to the arrest information, other information included data on prosecution outcomes, case outcomes and sentences, and correctional or custodial confinement.[13] Each of these components of criminal history were generated as separate files, and records of individuals were constructed by concatenating information for each person using the State Identification number (SID). The subpoenaed records included thousands of specific arrest charges based on chapters and subsections of the Illinois

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[10] *See, e.g.*, Oral Argument, *United States v. Davis*, 14-1124, Dkt. 40 at 11:49 (7th Cir. May 21, 2014) ("The comparison group should be individuals who have sustained prior state or federal convictions for offenses involving robbery, narcotics, or firearms . . . ."), *available at* http://media.ca7.uscourts.gov/sound/2014/nr.14-1124.14-1124_05_21_2014.mp3; Government Motion for Reconsideration Regarding Discovery Order, *United States v. Williams*, 12-CR-887, Dkt. 74 (N.D. Ill. Aug. 21, 2013) ("Defendants have failed to identify any individuals remotely similar to themselves – people with criminal histories including narcotics and weapons offenses who sought to commit potentially violent robberies – who were not further investigated or prosecuted because of their race.").

[11] ATF Manual at A-31 – A-32.

[12] The offenses and variables are further explained *infra* in Table 1 at 26 and notes 43, 44 and the accompanying text.

[13] However, extensive missing records and incomplete information precluded use of the custodial data to determine lengths and locations of correctional confinement.

criminal statutes. Appendix E provides examples of the coding of a subset of frequently cited specific statutes – among the thousands in the ISP dataset – into the crime categories shown in Appendix D.

3. Coding Race: Hispanic Surname Analysis

Both sources of criminal history information provided for this litigation have limited or no information on the Hispanic ethnicity either of the defendants or the potentially eligible population. The ISP data identified less than .1% of the 292,442 potential eligibles as Hispanic. For the defendants, criminal history records ("rap sheets") contained no information on Hispanic ethnicity. For that group, information on race was supplemented and verified using individual-level inquiries by defense counsel in consultation with defendants ("Hispanic Verified").

I also used a second method to determine Hispanic ethnicity in these two populations. I applied a commonly-utilized method that assigns Hispanic ethnicity based on self-reported ethnicity data from the 2000 United States Census.[14] This method has been applied and accepted by the Court in a recent case in the U.S. District Court for the District of Arizona.[15] The method was applied in that case to determine the size and proportion of the Hispanic population in class action litigation alleging racial discrimination under the Equal Protection Clause of the Fourteenth Amendment. Details of the procedure are discussed in Appendix F and are summarized here.

The Census Bureau has created a list of all surnames occurring 100 or more times in the 2000 Census data and the corresponding likelihood of an American with that name being Hispanic.[16] Using this list, I treat defendants and potential eligibles as Hispanic if the probability of a person being Hispanic based on their last name exceeds certain thresholds. "Hispanic (60%)" means that, based on their last name, a person is more than

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[14] Ralph B. Taylor, Initial Expert Report (Dec. 2, 2010), *Melendres v. Arpaio*, 07-CV-2513, Dkt. No. 424-2, Ex. B (D. Ariz. Apr. 29, 2011); Ralph B. Taylor, Rebuttal Expert Report (Feb. 4, 2011), *id.*, Dkt. 424-3, Ex. C (D. Ariz. Apr. 29, 2011).

[15] "Dr. Taylor relied on independent U.S. Census data correlating the likelihood that a person with any given name self-identified as Hispanic. He did a differential analysis that focused particularly on names whose owners identified as Hispanic more than 90% of the time, more than 80% of the time, and more than 70% of the time. He also included names whose owners self-identified as Hispanic at a 60% threshold as 'a type of robustness analysis.'" Findings of Fact and Conclusions of Law, *Melendres*, 07-CV-2513, Dkt. 579 at 79 (May 24, 2013). "Dr. Taylor's statistics in this respect were, apparently, more sophisticated than those provided in the 1980 census list of Spanish surnames." *Id.* at 79 n.69.

[16] The current analysis used the 2000 Census Hispanic surname list B. *See* United States Census Bureau, "Frequently Occurring Surnames from the Census 2000, File B: Surnammes Occurring 100 or more times," *available at* http://www.census.gov/topics/population/genealogy/data/2000_surnames.html.

60% likely to be Hispanic. For each person, I calculate if they are Hispanic at the 60%, 70%, 80%, and 90% cutoffs.

For the potential eligible comparison group, I use the 60% Hispanic cutoff throughout the analysis, with a robustness check using the 90% Hispanic cutoff. I use this conservative measure in order to provide a consistent basis for statistical tests to determine disparate treatment. As shown in Table 4, *infra* at 21, the summary statistics for the Hispanic population at the 60%-80% thresholds are nearly identical, reducing potential error or bias that might be a function of the surname classification method and any differences between the thresholds.

For defendants, both the Hispanic 60% and the Hispanic Verified measures of Hispanic ethnicity are used in the analyses. I use the conservative Hispanic 60% measure to provide a consistent basis for statistical tests to determine disparate treatment. Table 4, *infra* at 21, shows that the summary statistics for the Hispanic population at the 60%-80% thresholds are identical, reducing potential error or bias that might be a function of the surname classification method and any differences between the thresholds. Appendix F presents a full discussion of the methods for the Hispanic Surname Analysis.

B. Measures

From the respective data sources, records of each arrest, conviction, sentence and custodial placement were aggregated to create a criminal history for each defendant and for each person in the pool of potential eligibles. The following variables were included in the aggregated criminal history data file:

Variables Created from Rap Sheets and Criminal Histories

Race - Black	Number of Arrests
Race - non-Hispanic White	Number of Convictions
Ethnicity - Hispanic (60%)	Number of Arrests – UCR Violent†
Ethnicity - Hispanic (70%)	Number of Arrests – UCR Expanded
Ethnicity - Hispanic (80%)	Number of Convictions – UCR Violent†
Ethnicity - Hispanic (90%)	Number of Convictions – UCR Expanded
Gender - Female	Number of Arrests and Convictions – Weapons Offenses
Age	Number of Arrests and Convictions – Drug Possession
Age at First Arrest	Number of Arrests and Convictions – Drug Sale
Number of Prison Sentences	Number of Arrests and Convictions – Marijuana Possession
Number of Jail Sentences	Number of Arrests and Convictions – Marijuana Sale
Percent of Arrests in Chicago	

Notes: †Based on ATF Manual.

The data are arrayed in the database for each individual as of January 1st of each year 2006-2013. This permits controls for criminal activity over time taking into account the specific temporal period when Stash House Program arrests took place and more precise specification of selection effects for those periods.

III. THE STASH HOUSE DEFENDANTS

A. Stash House Defendant Population

The population for analysis is a set of 94 defendants spanning 24 cases.[17] According to the ATF, the investigation should "target persons who show a propensity of doing harm to the public through violent behavior/armed robberies and whose activities have been documented either through criminal history, criminal reputation, or self-incrimination."[18] The ATF Manual setting standards for Stash House cases goes on to state "minimum criteria [that] must be followed."[19]

In addition to setting forth the criteria for recruitment, the ATF Manual states that "[t]he undercover agent must meet with at least two members of the robbery crew."[20] The ATF Manual also states that successful prosecutions "place a greater emphasis on the undercover conversations as opposed to … the physical evidence obtained at the time of arrest."[21] And, "[i]t is therefore mandatory that an undercover agent … be used throughout the investigation, up to and including the arrest of the *subjects*."[22] Throughout the section of the ATF Manual describing the procedures, there is repeated emphasis on directions given by the undercover ATF agent to the "violator(s)."[23] The ATF Manual goes on to describe the undercover agent's role in supervising the "robbery crew": "The undercover agent must meet at least two members of the robbery crew."[24] For example, in referring to meetings between the undercover ATF agent and the "violator(s)," the Manual states:

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[17] At the outset of research for these proceedings, 25 cases were identified, each including multiple defendants. However, one case, *U.S. v. Vidal*, was dropped from the analysis after attorneys for defendants notified me that this was not an ATF case.

[18] ATF Manual at A-31.

[19] *Id.* at A-31 – A-32.

[20] *Id.* at A-32.

[21] *Id.*

[22] *Id.* (emphasis added).

[23] *Id.* at A-33, § 3250.1B.e(2).

[24] *Id.* at A-32.

> "This also allows the undercover agent an opportunity to speak with all members of the organization in the event that all subjects were not present at prior meetings."[25]

Accordingly, the analyses in this Report examine the full set of defendants in each case together in each statistical test. Based on statements in the ATF Manual setting forth procedures that undercover agents will follow, these procedures place undercover agents in full control and active management of the activities of the entire "robbery crew," including the initial target(s) of the investigation and the other members of the "crew." The analyses of the full complement of defendants directly address the claims in this litigation, more so than an analysis focusing solely on the initial targets. According to the stated procedures, the undercover agents approve of the full membership of each "crew," meet on several occasions with the full "crew," are responsible to their supervisors at ATF for the training of all the conspirators, and prepare the full "crew" to take the substantial steps necessary for a successful prosecution.

B. Who are the Stash House Defendants?

1. Identifying Defendants

To identify the 94 defendants, I relied on three sources: (1) the "takedown memoranda," (2) criminal complaints, and (3) the initial reports of investigation (ROIs) for each case. I consider the ATF takedown memo to be the controlling document of the investigation because it provides the aggregated record of the facts of the investigation up to the arrest. In some instances, further investigations after the completion of the takedown memo but before the Stash House arrest took place revealed additional facts.[26] In the four cases where the takedown memo has not been produced to me, I rely on the complaint and the initial ROIs read in tandem.[27]

2. Defendants by Race

Table 2 (on the following pages) lists the Stash House cases. The table also shows the race of each defendant, with Hispanic defendants identified using the Hispanic Surname

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[25] *Id.* at A-34.

[26] For example, in *Williams*, 12-CR-887, the last meeting/contact listed in the takedown memorandum was on November 8, 2012 (Takedown Memo at 3, 5–6). The takedown memo also states that it anticipates future meetings on November 12 and 13 (Takedown Memo at 6). It was during a post-takedown memorandum meeting on November 12 that the ATF met Mr. Hummons (Complaint at 12–13). The defendants were arrested on November 14, 2012 (Complaint at 18).

[27] *United States v. Davis*, *United States v. Hall*, *United States v. Tanner*, and *United States v. Harris*.

Analysis method described earlier.[28] Hispanic ethnicity is assigned using the 60% threshold.[29] *See* Appendix F.

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[28] *See supra* Subsection II.A.3 of this Report. As discussed in that section and in Appendix F, this method undercounts Hispanics when compared to self-identification of ethnicity and information from attorneys. However, to maintain methodological consistency in classifications between the defendant and potential eligible groups, the analyses proceed using the computed ethnicity.

[29] Three of the defendants in *United States v. Elias*, Adrian and Salvador Elias and Angel Olsen, have been classified as White using the Spanish surname methodology at the 60% cutoff. In reality all three are Hispanic. This conclusion is based on discovery and communications with defense counsel in consultation with the defendants. Specifically, Adrian and Salvador Elias self-identify as Hispanic and the ATF takedown memorandum in this case identifies them as Hispanic. Olson self-identifies as Hispanic, *see United States v. Elias*, 13 CR 0476, Dkt. 162 at ¶ 1 (N.D. Ill. Oct. 18, 2013), and, based on communications with defense counsel, Olson has one Hispanic parent and one Black parent. In addition, the U.S. Attorney's Office previously categorized Olson as Black in an earlier filing in which Hispanic categorizations were omitted. *Williams*, 12 CR 887, Dkt. 74-1 at 2 (Aug. 21, 2013).

Table 2. List of Defendants

Year of Investigation Initiation	Case Name	Defendant Name (Initial Targets Highlighted)	Race / Ethnicity[1][2]
2006	United States v. Corson, et al.	Alvarez, Oscar	Hispanic (60%)
.	.	Corson, Aaron	White
.	.	Corson, Marcus	White
.	United States v. Harris, et al.	Blitch, Christopher	Black
.	.	Carwell, Michael	Black
.	.	Harris, Michael	Black
.	.	Washington, Devarl	Black
.	United States v. Lewis, et al.	Billingsley, Lavoyce	Black
.	.	Lewis, Scott	Black
.	.	Williams, Vernon	Black
.	United States v. Tankey, et al.	King, James	Black
.	.	Lewis, Demarlon	Black
.	.	Tankey, Joaquin	Black
2007	United States v. George, et al.	George, Robert	White
.	.	Spagnola, Michael	White
.	United States v. Sidney, et al.	Lawrence, Charles	Black
.	.	Scott, Jerome	Black
.	.	Sidney, Ben	Black
.	United States v. Tanner, et al.	Calvert, Fred	Black
.	.	Calvert, Keith	Black
.	.	Tanner, Rodney	Black
.	United States v. Walker, et al.	Logan, Rashad	Black
.	.	Walker, Hurreon	Black
2008	United States v. Farella, et al.	Blais, Michael	White
.	.	Catanzaro, Donald	White
.	.	Farella, Frank	White
.	United States v. Hall, et al.	Gordon, Karinder	Black
.	.	Hall, Shamonte	Black
.	.	Ray, Rodney	Black
.	United States v. Mahan, et al.	Barber, Mario	Black
.	.	Mahan, Tony	Black
.	.	McKenzie, James	Black
.	.	Stewart, Steven	Black
2009	United States v. Mayfield, et al.	Kindle, Montreece	Black
.	.	Mayfield, Leslie	Black
.	.	Ward, Nathan	Black
.	.	White, Dwayne	Black
2011	United States v. Alexander, et al.	Alexander, William	Black
.	.	Midderhoff, Hugh	Black
.	.	Saunders, Devin	Black
.	United States v. Flowers, et al.	Adams, Anthony	Black
.	.	Conley, Tracy	Black
.	.	Flowers, David	Black
.	.	Flowers, Myreon	Black
.	.	Jones, Dwayne	Black
.	.	Space, Rudy	Black
.	.	Trapp, Anwar	Black
2012	United States v. Brown, et al.	Brown, Abraham	Black
.	.	Davis, Christopher	Black
.	.	Jones, Dwaine	Black
.	.	Taylor, Kenneth	Black
.	.	Washington, Alfred	Black

Year of Investigation Initiation	Case Name	Defendant Name (Initial Targets Highlighted)	Race / Ethnicity[1][2]
.	United States v. Cousins, et al.	Cousins, David	Black
.	.	Cousins, Michael	Black
.	.	Lloyd, Dunwon	Black
.	United States v. Davila, et al.	Davila, Jason	Hispanic (60%)
.	.	Davila, Justin	Hispanic (60%)
.	.	Hadley, Neiko	Black
.	United States v. Davis, et al.	Barbee, Corey	Black
.	.	Byrd, Jayvon	Black
.	.	Davis, Paul	Black
.	.	Jeffries, Dante	Black
.	.	Morris, Julius	Black
.	.	Smith, Vernon	Black
.	.	Withers, Alfred	Black
.	United States v. DeJesus, et al.	Borrero, Luis	Hispanic (60%)
.	.	Corona, Jesus	Hispanic (60%)
.	.	DeJesus, Benjamin	Hispanic (60%)
.	.	Malave, Ceferino	Hispanic (60%)
.	United States v. Paxton, et al.	Berry, Adonis	Black
.	.	Paxton, Cornelius	Black
.	.	Paxton, Randy	Black
.	.	Walker, Randy	Black
.	.	Webster, Matthew	Black
.	United States v. Payne, et al.	Bruce, Deandre	Black
.	.	Jackson, Brandon	Black
.	.	Jackson, Brian	Black
.	.	Payne, William	Black
.	United States v. Williams, et al.	Hummons, John	Black
.	.	Lee, Howard	Black
.	.	Williams, Antonio	Black
2013	United States v. Elias, et al.	Benitez, Demetrio	Hispanic (60%)
.	.	Elias, Adrian	White (Verified Hispanic)
.	.	Elias, Salvador	White (Verified Hispanic)
.	.	Ledesma, Miguel	Hispanic (60%)
.	.	Olson, Angel	White (Verified Hispanic)
.	.	Reding, Paul	White
.	.	Sistrunk, Cornelius	Black
.	.	Stevens, Deeric	Black
.	.	Washington, Mishon	Black
.	United States v. Jackson, et al.	Jackson, Thomas	Black
.	.	Swain, Nolan	Black
.	.	Williams, Calvin	Black
.	.	Wrotten, Demetrius	Black

Notes:

[1] Race and ethnicity is based on rap sheets and the Hispanic surname analysis. Neiko Hadley, whose rap sheet lists him as both Black and White, has been categorized as Black based on confirmation by defense counsel in consultation with Mr. Hadley.

[2] The defendants in United States v. Elias are classified as White using the Hispanic surname methodology at the 60% cutoff, but are categorized as Verified Hispanic based on confirmation by defense counsel in consultation with the defendants.

The table below summarizes the race and ethnicity (Hispanic 60%) for the full defendant sample from Table 2.

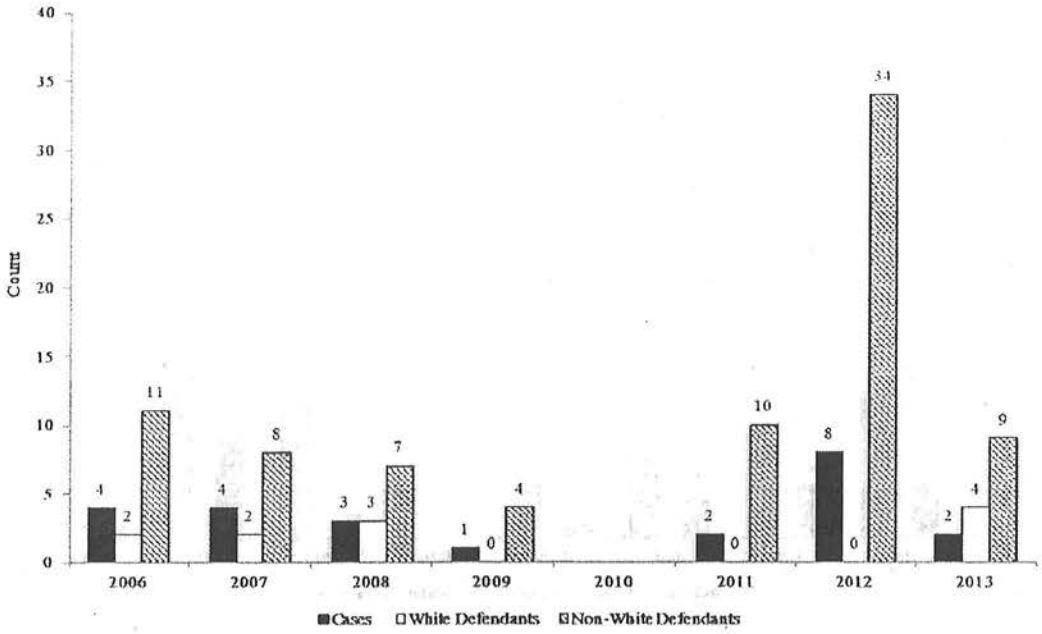
Race	All Defendants
Black	74 (78.7%)
Hispanic (60%)	9 (9.6%)
White	11 (11.7%)
Total	94 (100%)

The tables below and Figure 1.1 show that case origination took place in two distinct intervals.[30] The tables below collapse the years into the two periods. From 2006-2009, 12 cases were originated with 37 defendants. There were no cases originated in 2010, and another 12 cases were originated from 2011-2013, with 57 defendants. The pattern of recruitment by race changed noticeably from the first to the second period. Figure 1.1 and the first table below shows the number of cases originated by year, and the number of White and non-White (Black and Hispanic) defendants during each year. In the table below and in Figure 1.1, race and ethnicity are shown using the Hispanic 60% criterion.

Defendant Race	2006-2009	2011-2013
Black	29 (78.4%)	45 (78.9%)
Hispanic (60%)	1 (2.7%)	8 (14.0%)
White	7 (18.9%)	4 (7.0%)
Total	37 (100%)	57 (100%)

[30] Note that three of the defendants listed as White in Figure 1.1 and in the tables on this page under the Hispanic 60% threshold have been verified by defense counsel in consultation with defendants to be Hispanic. *See supra* note 29.

Figure 1.1. Cases and Defendants by Year of Investigation Initiation (Estimated Hispanic - 60%)

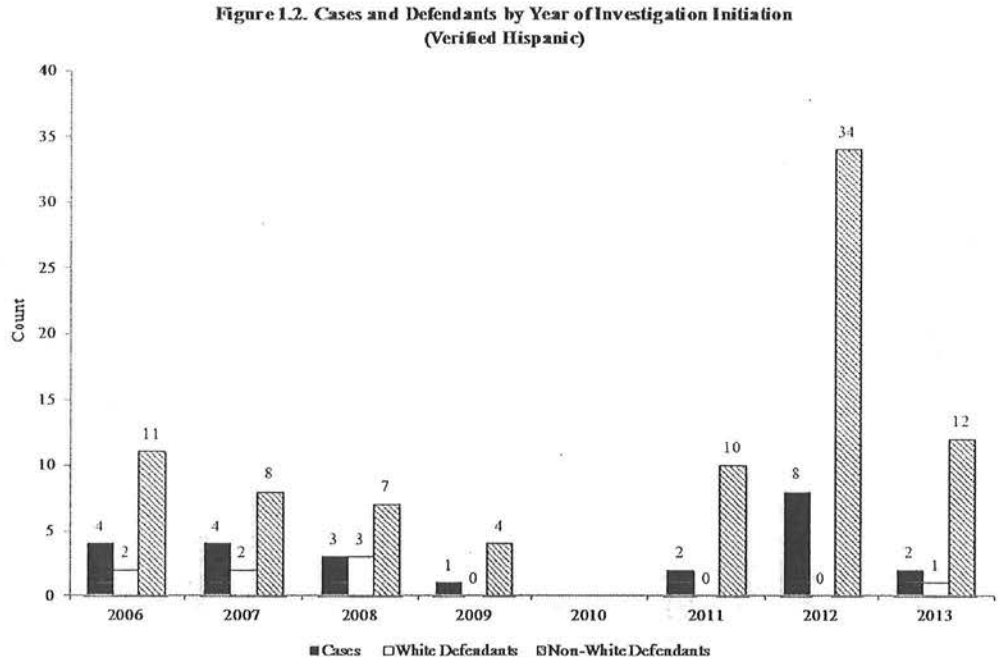


In the first interval, 30 of 37 defendants, or 81.1%, were either Black or Hispanic. The trend data show that over time, minority representation in the racial and ethnic composition of the defendant pool became more concentrated. Starting in 2011, 53 of 57 defendants, or 93.0%, were either Black or Hispanic. Among the 57 defendants in the latter period, 45 (78.9%) were Black, and 8 (14.0%) were Hispanic.

The next summary table and Figure 1.2 show the same trend, but this time with race and ethnicity data that were verified by defense counsel and self-reported by defendants. In the 12 cases originating between 2006 and 2009, 30 of 37 defendants (81.8%) were Black or Hispanic. From 2011-2013, 56 of 57 defendants (98.2%) were Black or Hispanic.

Together, the summary table and Figure 1.2 show that, using the verified race and ethnicity data, recruitment into the Stash House Program from 2011-2013 was nearly exclusively minority defendants. As shown in the next section, it is extremely unlikely that this selection took place by chance alone.

Defendant Race	2006-2009	2011-2013
Black	29 (78.4%)	45 (78.9%)
Hispanic (Verified)	1 (2.7%)	11 (19.3%)
White	7 (18.9%)	1 (1.8%)
Total	37 (100%)	57 (100%)



3. *Unadjusted Probabilities of Defendant Selection by Race*

Given the race and ethnicity distributions in the defendant and potential eligible populations, I next simply estimated the probability of drawing a sample with its racial distribution of 79% Black and 13% Hispanic from the very large pool of 292,442 potential eligibles. In that pool, 55% are Black and 17% are Hispanic (60%) (*See* Table 4 *infra* at 21). To do this, I estimated a binomial distribution, which takes the form:

$$P(x) = \frac{N!}{x!(N-x)!}\pi^{x}(1-\pi)^{N-x}$$

where P(x) is the probability of x successes out of N trials, N is the number of trials, and π is the probability of success on a given trial. From this, the probability of drawing a sample of defendants with the observed racial and ethnic distribution can be estimated. Tables 3.1 and 3.2 show the results. Separate estimates were developed for Black defendants only, and also for non-White defendants combined (Black and Hispanic 60%). Separate estimates were developed for the post-2010 period, when the number of White defendants was sharply reduced.

Table 3.1. Binomial Probability of Defendant Selection (Estimated Hispanic - 60%)

Panel I: All Years

Test	Defendants % Black	Total Eligible % Black	Probability
Probability of Selecting 74 Black Defendants from 94 Defendants	78.7%	55.4%	0.0%
	Defendants % Non-White	**Total Eligible % Non-White**	**Probability**
Using 60% Hispanic Surname Probability Cutoff			
Probability of Selecting 83 Non-White Defendants from 94 Defendants	88.3%	72.2%	0.0%

Panel II: Post-2010

Test	Defendants % Black	Total Eligible % Black	Probability
Probability of Selecting 45 Black Defendants from 57 Defendants	78.9%	55.4%	0.0%
	Defendants % Non-White	**Total Eligible % Non-White**	**Probability**
Using 60% Hispanic Surname Probability Cutoff			
Probability of Selecting 53 Non-White Defendants from 57 Defendants	93.0%	72.2%	0.0%

Notes:
[1] "Probability" is the percent chance that *n* number of Black/non-White defendants or more are selected.
[2] A defendant is classified as non-White if he is Black or Hispanic.

The upper portion of Table 3.1 shows that the probability of selecting a sample of 74 Black defendants in a pool of 94 from the population of potential eligibles is less than 0.1%, which is rounded to 0%. This is a very low probability estimate. In the post-2010 period, the probability is similarly low: 0% for Black defendants, and 0% for non-White defendants.

Table 3.2. Binomial Probability of Defendant Selection (Verified Hispanic)

Panel I: All Years

	Defendants % Non-White	Total Eligible % Non-White	Probability
Using 60% Hispanic Surname Probability Cutoff and Verified Hispanic			
Probability of Selecting 86 Non-White Defendants from 94 Defendants	91.5%	72.2%	0.0%

Panel II: Post-2010

	Defendants % Non-White	Total Eligible % Non-White	Probability
Using 60% Hispanic Surname Probability Cutoff and Verified Hispanic			
Probability of Selecting 56 Non-White Defendants from 57 Defendants	98.2%	72.2%	0.0%

Notes:
[1] "Probability" is the percent chance that *n* number of Black/non-White defendants or more are selected.
[2] A defendant is classified as non-White if he is Black or Hispanic.

Table 3.2 shows the same results using the verified Hispanic ethnicity classification. Recall that three defendants were classified as White using the Hispanic Surname Analysis method, but their actual ethnicity is Hispanic as verified by defense counsel in consultation with the defendant. The results here are similar to Table 3.1: the probabilities of randomly selecting a defendant pool that matches the actual defendant pool are 0%, and 0% for defendants after 2010.

The results suggest that it is extremely unlikely that a Stash House defendant pool would be selected with the racial and ethnic composition that we observe, given the racial and ethnic composition of the pool of potential eligibles. In the three tests that follow in Sections IV and V, the estimates are adjusted for the simultaneous effects of the ATF criteria, the expanded set of ATF criteria, and other criminal propensity indicators on the probability of selection as a defendant.

4. Defendant Prior Records

In addition to examining the racial distribution, I arrayed the Stash House defendants using the measures of criminal activity that describe the "criminal propensity" indicia listed in the ATF Manual.[31] The defendants are a heterogeneous group, including some

[31] ATF Manual at A-31 – A-32; *see supra* Section II.A.2 of this Report.

who have very limited criminal histories while others have extensive histories. Specifically, with respect to the conviction criteria:

- 19 of the 94 defendants had no prior convictions for any offense prior to the Stash House case.
- 65 of the 94 defendants had no prior convictions for any of the ATF UCR Part I Violent Offenses.[32]
- 78 of the 94 defendants had no prior convictions for any of the ATF Expanded Violent Offenses.
- 22 defendants had only one prior conviction for the ATF UCR Part I Violent Offenses
- 15 defendants had only one prior conviction for the ATF Expanded Violent Offenses.
- 39 defendants had no prior convictions for drug or weapons offenses.

The patterns of prior arrests show much the same. Specifically:

- 37 of the 94 defendants had no prior arrests for any of the ATF UCR Part I Violent Offenses.
- 29 of the 94 defendants had no prior arrests for the ATF Expanded Violent Offenses.
- 13 of 94 defendants had no prior arrests for drug or weapons offenses.

For the post-2010 recruitment period:

- 35 of 57 defendants had no prior convictions for the ATF UCR Part I Violent Offenses or the ATF Violent Expanded Offenses.

These patterns suggest that a substantial number of the Stash House defendants did not meet the ATF offense criteria as stated in the ATF Manual.[33] Nor did many of these defendants meet the expanded criteria, including a broader list of violent crimes. The widening of the offense criteria for recruitment resulted in the prosecution of dozens of persons who fail to meet either the stated or expanded ATF criteria in targeting the most violent offenders in the community. In turn, many of those who were recruited were lured into criminal conspiracies that exposed them to lengthy terms of confinement under federal criminal law without having satisfied the government's own objectives with respect to the most serious offenders in the community.

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[32] *See infra* notes 42–44 and accompanying text for definitions of which offenses are included in ATF UCR Part I Violent Offenses and ATF Expanded Violent Offenses.

[33] ATF Manual at A-31 – A-32.

C. Comparing Stash House Defendants and Potential Eligibles

Before proceeding to the results of the three tests for disparate treatment, a preliminary step is to examine the composition of the Stash House defendant and potential eligible populations. Table 4 provides summary statistics to compare the Stash House defendants to the population of 292,442 potential eligibles. *See infra* at 21. The potential eligibles were identified according to the criteria listed in Appendix B. Table 3 compares the 94 defendants to the potential eligibles on parameters of demographics and several dimensions of criminal history. The table shows that the two populations are well-matched along several dimensions, but poorly matched along several others. Specifically:

- 55% of the potential eligibles are Black, compared to 79% of the defendants.
- 17% of the potential eligibles are Hispanic,[34] compared to 10% of the defendants.
- Stash House defendants are younger (28.6 years) compared to potential eligibles (33.4 years).
- Stash House defendants were younger at first arrest: 18.5 years of age, compared to 21.6 years of age for potential eligibles.
- Potential eligibles had fewer prior convictions (2.3 compared to 2.8) but about the same number of prior arrests, compared to the Stash House defendants. The two groups had equivalent numbers of prior jail sentences.
- Of the total number of prior arrests for each group, about half were made by the Chicago Police Department.
- Defendants had more UCR Part I violent arrests (0.96 per person) compared to potential eligibles (0.69). Defendants also had more UCR Part I violent convictions (0.38 per person) compared to potential eligibles (0.21).
- Similar differences were observed for arrests and convictions for weapons offenses, and drug sale and possession charges.

It is important to note that in Table 4, for each of the criminal history and conviction parameters, the standard deviations (i.e., the variances) are quite large. This means that there is a large spread in these parameters, and there are large "tails" to the distributions. For example, the standard deviation for prior arrest for UCR Part I violent crimes is almost the same for potential eligibles as it is for the defendants, even though the average for the Stash House defendants is higher. In these instances, the mean (average) value can be misleading, as there may well be comparably large populations at the extreme values of those distributions. The disparate treatment tests control for those tails and distributions, and provide a more definitive test of differences in the populations.

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[34] This statistic uses the Hispanic 60% cutoff. The range of Hispanic population is 12% to 17%.

Table 4. ISP Data and Rap Sheet Data Summary Statistics (Defendant N = 94)

Variable	ISP Data (Excluding All Defendant Data)					Rap Sheet Data (All Charged Defendants)				
	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max
General Demographics										
Female	292,442	0.15		0	1	94	0.00		0	0
Black	292,442	0.55		0	1	94	0.79		0	1
Hispanic (60%)	292,442	0.17		0	1	94	0.10		0	1
Hispanic (70%)	292,442	0.17		0	1	94	0.10		0	1
Hispanic (80%)	292,442	0.16		0	1	94	0.10		0	1
Hispanic (90%)	292,442	0.12		0	1	94	0.04		0	1
Hispanic (60%) Plus Verified Hispanic	292,442	0.17		0	1	94	0.13		0	1
Age	292,329	33.36	11.86	10.00	80.00	94	28.58	8.20	13.50	46.50
Criminal History										
Age at First Arrest	291,953	21.59	7.63	10.03	79.98	94	18.47	3.58	11.09	36.92
Number of Arrests	292,442	10.55	11.28	0.00	294.75	94	11.14	8.80	0.00	49.00
Number of Convictions	292,442	2.34	2.65	0.00	63.50	94	2.79	3.09	0.00	20.00
Number of Prison Sentences	292,442	0.48	1.16	0.00	31.00	94	1.21	1.78	0.00	9.00
Number of Jail Sentences	292,442	0.99	1.55	0.00	50.00	94	0.98	1.42	0.00	8.00
Percent of Arrests by CPD	292,442	0.50	0.43	0.00	1.00	94	0.56	0.43	0.00	1.00
Arrest History										
Arrests for ATF Manual Violent (UCR Part 1)	292,442	0.69	1.21	0.00	25.38	94	0.96	1.24	0.00	6.00
Arrests for ATF Manual Violent (Expanded)	292,442	1.53	2.34	0.00	65.00	94	1.31	1.59	0.00	8.50
Arrests for Weapons	292,442	0.38	0.82	0.00	26.50	94	0.87	1.11	0.00	4.00
Arrests for Drug Sale	292,442	0.35	0.78	0.00	11.25	94	0.46	0.76	0.00	3.00
Arrests for Drug Possession	292,442	1.55	2.42	0.00	57.00	94	2.12	2.58	0.00	12.43
Arrests for Marijuana Sale	292,442	0.10	0.37	0.00	9.00	94	0.15	0.57	0.00	4.75
Arrests for Marijuana Possession	292,442	0.91	1.68	0.00	49.75	94	0.97	1.36	0.00	6.50
Conviction History										
Convictions for ATF Manual Violent (UCR Part 1)	292,442	0.21	0.52	0.00	10.00	94	0.38	0.75	0.00	4.00
Convictions for ATF Manual Violent (Expanded)	292,442	0.26	0.55	0.00	9.00	94	0.16	0.38	0.00	2.00
Convictions for Weapons	292,442	0.14	0.39	0.00	7.00	94	0.35	0.65	0.00	3.00
Convictions for Drug Sale	292,442	0.31	0.74	0.00	10.00	94	0.44	0.77	0.00	4.00
Convictions for Drug Possession	292,442	0.40	0.78	0.00	16.63	94	0.51	0.92	0.00	5.00
Convictions for Marijuana Sale	292,442	0.05	0.22	0.00	5.00	94	0.03	0.19	0.00	1.50
Convictions for Marijuana Possession	292,442	0.10	0.34	0.00	9.50	94	0.11	0.35	0.00	2.00

Note: Data is at the person level. For the ISP data, the data represents an 8-year average of 2006-2013. For the rap sheet data, the data represents an average of all years up to and including the year in which the defendant was involved in a stash house bust.

IV. METHODS FOR TESTING FOR DISPARATE TREATMENT

A series of three empirical tests provides the basis for assessing the selective enforcement claims underlying these cases.[35] Using multiple arrays of selection criteria and three different analytic models, I test to determine whether race predicts selection into the Stash House defendant pool, controlling for the selection criteria as stated in the ATF Manual and other documents. Each successive test is increasingly rigorous in isolating the role of race – net of other factors such as criminal history – in the selection of Stash House defendants. The tests begin with simple regressions and move on to analyses that approximate clinical trials to test the role of race in the selection of Stash House defendants.

A. Test 1

The first test is a disparate treatment test. The general test for evidence of disparate treatment is a regression equation that takes the form:

$$\text{Outcome} = \alpha + \beta_1 * \text{Minority} + \Sigma_i \beta_i * (\text{Plausible Non-Race Influences}) + \varepsilon,$$

where *Outcome* is the event or status of interest, *Minority* is an indicator for the racial composition or status of the unit observed, *Plausible Non-Race Influences* are a set of variables representing non-race factors that also might influence the outcome, and an error term ε that captures the variation in the outcome that cannot be explained by either Minority status or the Plausible Non-Race Influences. These models may include non-race influences that are correlated with race, so as to better identify the unique effects of race that are present once the influence of proxies for race are removed.[36]

Consider the following example, from *Griggs v. Duke Power Co.*, a seminal employment discrimination case.[37] In a disparate treatment claim, one could test whether the use of a high school diploma requirement biases the hiring process since African American job applicants may be less likely to have obtained a high school diploma. Had this race-correlated control been introduced, it would likely have reduced the racial disparity in the hiring rates – for the simple reason that minority applicants at that time were less likely to have obtained a high school diploma. Should a statistical test control for whether or not

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[35] *See, e.g.*, Sonja B. Starr, "Explaining Race Gaps in Policing: Normative and Empirical Challenges," U of Michigan Law & Economics Research Paper No.15-003 (Jan. 19, 2015), *available at* http://ssrn.com/abstract=2550032.

[36] For a general discussion of the specification of regression models to test for disparate treatment, *see generally* D. James Greiner, "Causal Inference in Civil Rights Litigation," 122 *Harvard L. Rev.* 533 (2008). For a general discussion of how regressions sort out the influences of predictors of an outcome, *see* Thomas J. Campbell, "Regression Analysis in Title VII Cases: Minimum Standards, Comparable Worth, and Other Issues Where Law and Statistics Meet," 36 *Stanford L. Rev.* 1299 (1984).

[37] *Griggs v. Duke Power Co.*, 401 U.S. 424 (1971).

an applicant had a high school diploma? As Ian Ayres points out,[38] in a disparate treatment case, the answer is yes. Under a disparate treatment theory, the critical question is whether an applicant's race was the cause of being denied employment. If applicants were rejected because the employer chose not to hire diploma-less applicants, the applicants' race would not be a "motivating factor" in the employer's decision (unless there was evidence to establish that the employer adopted the diploma requirement with the intention of excluding minority applicants from the work force). The goal in specifying these models is to identify the effects of race on outcomes after simultaneously considering factors that may be relevant as well. Failure to do so raises the risk of "omitted variable bias", which could lead to erroneous conclusions about the effects of variables that do appear in a regression test.[39]

The test is performed using a logistic regression procedure.[40] Logistic regression is well-suited for analysis of dichotomous outcomes, such as selection into a specific category or program. The results show the log odds of being selected into the category of interest, adjusted for the effects of other variables entered into the regression. The model takes the form of

$$\pi_i = Pr(Y_i=1|X_i=x_i) = \frac{\exp(\beta_0+\beta_1 x_i)}{1+\exp(\beta_0+\beta_1 x_i)}$$

where Y is the outcome of interest (0 or 1), π is the probability that an individual *i* will be in the category of interest, β_0 is the intercept, and βx represents the concurrent effects of a set of explanatory variables or predictors of that outcome. In this case, we are interested in selection as a Stash House defendant, and race is one of the predictors included in the vector *x*.

In this and subsequent analyses, all defendants were pooled for the analyses. In each instance, the outcome of interest is selection as a defendant. Separate models are

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[38] Ian Ayres and Jonathan Borowsky, *A Study of Racially Disparate Outcomes in the Los Angeles Police Department* at 5, 15 (October 2008), *available at* https://www.aclusocal.org/wp-content/uploads/2015/09/11837125-LAPD-Racial-Profiling-Report-ACLU.pdf.

[39] *See, e.g.*, Ian Ayres, "Testing for Discrimination and the Problem of 'Included Variable Bias'," Yale Law School Working Paper (2010), *available at* http://islandia.law.yale.edu/ayres/ayresincludedvariablebias.pdf; Ian Ayres, "Three Tests for Measuring Unjustified Disparate Impacts in Organ Transplantation: The Problem of 'Included Variable' Bias," 48 *Perspectives in Biology and Medicine* 68 (2005).

[40] *See generally* David W. Hosmer Jr, and Stanley Lemeshow, *Applied Logistic Regression* (2004). *See also* Scott Menard, *Applied Logistic Regression Analysis* (2002) (discussing the assumptions of a logistic regression model and its difference from ordinary multiple (least squares) regression models).

estimated with cumulative sets of predictors that adds blocks of variables to the prior model.

Table 1 shows the design of the separate models. Each model iterates additional information and allows us to see if there are particular types or thresholds of information, such as demographic factors or criminal history, that explain whether and why the selection of Stash House defendants is based on race or ethnicity.

Model 1 includes only a variable for Black. This model simply tests whether defendants are more likely to be Black than the potential eligibles. Model 2 tests whether defendants are more likely to be Black or Hispanic than the potential eligibles. Model 3 re-estimates Model 2, adding gender and age variables. In criminological research, *age at first arrest* is a robust predictor of the length and seriousness of criminal careers.[41] Since all the defendants are males, there is no estimate (odds) reported for females.

Model 4 includes the variables specified in the eligibility criteria in the ATF Home Invasions Operations Manual, including both robbery and armed robbery.[42] Because the ATF Manual's eligibility criteria closely parallel the offenses set out in the list of violent crimes in Part I of the FBI's Uniform Crime Report (UCR), these variables are labeled "ATF Manual UCR Part I Violent Arrests" and "ATF Manual UCR Part I Violent Convictions."[43] This model also includes a variable with an expanded list of additional violent felony crimes. (ATF Manual – Expanded). This expanded list is included because the definition of "violent crime" proffered by ATF is broader than the enumerated offenses; it includes *all* offenses that "involve force or threat of force."[44] Model 5

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[41] Alex R. Piquero, David P. Farrington, and Alfred Blumstein. "The Criminal Career Paradigm," 30 *Crime and Justice* 359–506 (2003). *See also* Alex Piquero, Raymond Paternoster, Paul Mazerolle, Robert Brame, and Charles W. Dean, "Onset age and offense specialization," 36 *Journal of Research in Crime and Delinquency* 275-299 (1999).

[42] ATF Manual at A-31 – A-32.

[43] The first four of the ATF's enumerated offenses make up the entire category of what the FBI terms "violent index crimes": "[V]iolent crime is composed of four offenses: murder and nonnegligent manslaughter, rape, robbery, and aggravated assault." *See* FBI Uniform Crime Report, Crime in the United States (2014), *available at* https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2014/crime-in-the-u.s.-2014/offenses-known-to-law-enforcement/violent-crime. The FBI likewise defines violent crimes "as those offenses that involve force or threat of force." *Id.*

[44] ATF Manual at A-31. Based on the statutes cited in the arrest and conviction records in the ISP database of criminal histories of potential eligibles, the following violent crimes are included in the "ATF Expanded" category: domestic battery, battery/bodily harm, battery, assault, unlawful restraint, armed violence, intimidation, aggravated unlawful restraint, involuntary manslaughter/reckless homicide, vehicular invasion, disarming a peace officer, kidnaping, aggravated kidnaping, aggravated fleeing/bodily injury, kidnaping/armed with firearm, aggravated intimidation, concealing homicidal death, interference/assault official, involuntary/reckless homicide/unborn child, mob action.

includes three additional parameters of criminal career. The number of prison and jail sentences is included as a measure of the person's criminal propensity and crime seriousness spanning his or her criminal career.

Model 6 adds several variables that were identified as inclusive of the selection criteria, based on statements made in court and in the media that expanded the scope of offenses in the ATF Manual. These variables are arrayed in Subsection II.A.2 and accompanying notes above.

In each regression model, fixed effects are included for year in the interval from 2006-2013, grouping the cases by the year when they began. Fixed effects allow for statistical control of any unique or unobservable conditions that may have influenced the selection and recruitment of defendants in each year. All models are estimated with robust standard errors that are clustered for each individual. [45]

[45] *See, e.g.*, Guido Imbens and Joshua Angrist, "Identification and Estimation of Local Average Treatment Effects," 62 *Econometrica* 467-475 (1994).

Table 1. Variables and Measures Used in Each Estimation Model (Cumulative)

Model	Model Parameters	Variables
1	Black defendants only	Black
2	Black and Hispanic defendants	Hispanic (60%)
3	Demographic variables	Age at First Arrest (logged) Age at Jan 1st (logged) Female
4	ATF Manual and ATF Manual (Expanded)	N of ATF Manual UCR Part I Violent Arrests (logged) N of ATF Manual UCR Part I Violent Convictions (logged) N of ATF Manual (Expanded) Violent Arrests (logged) N of ATF Manual (Expanded) Violent Convictions (logged)
5	Other Criminal History Variables	N of Prison Sentences (logged) N of Jail Sentences (logged) % of Arrests by Chicago Police Department
6	US Attorney Statements (Post-Hoc)	N of Arrests for Weapons Offenses (logged) N of Convictions for Weapons Offenses (logged) N of Arrests for Drug Sale (logged) N of Convictions for Drug Sale (logged) N of Arrests for Drug Possession (logged) N of Convictions for Drug Possession (logged) N of Arrests for Marijuana Sale (logged) N of Convictions for Marijuana Sale (logged) N of Arrests for Marijuana Possession (logged) N of Convictions for Marijuana Possession (logged)

Note: Logged measures use the natural log of the value. This transformation is done to limit the influence of extreme values in the regression estimates. When the value is zero, the natural log is not computed. To avoid missing data for those values, a value of zero is recoded to 0.01 before the log transformation is computed.

B. Test 2

The second test analyzes race as a "treatment" variable predicting selection of individuals of specific races – Black compared to White, or non-White compared to White – as a Stash House defendant or target. In this test, the model assumes that persons are assigned to a treatment – in this case, race – in a manner that in theory is independent of the outcome – in this case, selection as a defendant. The model then estimates the effects of the treatment *race* on the outcome *Stash House Program selection*. The study population

in this test is the pooled sample of defendants and potential eligibles, with each group marked by their group membership (the outcome variable).

The procedure again uses the logistic regression equation. The distinction in this analysis is that the procedure first estimates one logistic regression model to predict treatment status – in this case, race – and then uses another logistic regression model to predict the outcomes given the results of the first model. The second model incorporates the covariates, or other predictors, including those that may be correlated with the treatment variable. This is known as Augmented Inverse Probability Weighting.[46] The model produces consistent estimates of the predictors because the treatment (race) is assumed to be independent of the potential outcomes after conditioning on the other predictors (the covariates). If a predictor is statistically significant, it is presumed to be not independent of the outcome, but instead a predictor of that outcome. This procedure is called a *double robust* model because of the use of the separate regression models to estimate the effects of the treatment on the outcome.[47]

As before, the models include fixed effects for year. The models are estimated in a sequence from Table 1, with the first model combining the predictors from models 1-3, and then separate estimates for models 4-6. The models are estimated with two specifications for race and ethnicity. One set of models compares Black and White persons (excluding Hispanic persons), and a second compares non-White persons (Black and Hispanic combined) with White persons.

C. Test 3

The third test uses propensity score matching (PSM) to simulate an experiment to determine the effect of race on the outcome of interest: selection as a defendant into the Stash House Program. Ideally, an experiment would be conducted that adopts the logic of fair housing audits. In those audits, prospective renters with identical rental and income histories but who are from different racial or ethnic groups are sent to housing agents (sellers or rental agents) to determine whether there are differences by race in

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[46] Adam N. Glynn and Kevin M. Quinn, "An introduction to the augmented inverse propensity weighted estimator," *18 Political Analysis* 36-56 (2010); Andrea Rotnitzky, "Inverse probability weighted methods," in *Longitudinal Data Analysis* (Garrett Fitzmaurice et al., eds.), 453-476 (2009).

[47] *See* Heejung Bang and James M. Robins, "Doubly robust estimation in missing data and causal inference models," 61 *Biometrics* 962-973 (2005). *See also* Michele Jonsson, Funk Daniel Westreich, Chris Wiesen, Til Stürmer, M. Alan Brookhart, and Marie Davidian, "Doubly robust estimation of causal effects," 173 *American Journal of Epidemiology* 761-767 (2011); James R. Carpenter, Michael G. Kenward, and Stijn Vansteelandt, "A comparison of multiple imputation and doubly robust estimation for analyses with missing data," 169 *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 571-584 (2006).

several dimensions of renter or seller responses.[48] Any disparity in these measures of housing assistance are attributable to the race or ethnicity of the seller or agent, since all other variables are equally distributed among the auditors.

For obvious reasons, such an experiment is not possible in the context of selection of defendants for the Stash House Program. When experiments on a *treatment* are not possible, propensity score matching (PSM) is a statistical technique that attempts to estimate the effect of a treatment by accounting for the covariates that predict receiving the treatment. The goal of the analysis is to reduce the confounding effects of factors that may predict *receiving the treatment* with the effects of the treatment itself.[49]

For each person in the "treatment" group – Black or non-White people – one or more persons is selected from the "control" group – White people – that are matched to the first group on all characteristics except race. This simulates random assignment to a treatment group – *race* – by matching persons on numerous predictors of treatment assignment. Similarity between subjects is based on estimated treatment probabilities, known as propensity scores.

The average treatment effect (ATE) is computed by taking the average of the difference in probability of selection between the observed and potential outcomes (Stash House defendant v. potential eligible) for each subject. The precision of the match for subjects is adjustable, so that the effects can be calibrated along a precision scale (a *caliper*). A smaller caliper or precision implies a more rigorous estimate of the treatment effects. The difference in estimates for different levels of precision provides a range of effects, with the "true" effect somewhere in that range.

As in Test 2, separate models are estimated for Blacks versus Whites (with Hispanics excluded) and Blacks and Hispanics (non-White) versus Whites. The same four sets of models are estimated for each race/ethnicity comparison. The models are in turn estimated at two calipers: .100 and .025. Smaller calipers are more precise but risk

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[48] For example, the number of housing units made available to the two prospective renters or buyers, the terms and conditions of the rental or sale, information or assistance in obtaining financing, the racial and ethnic composition of neighborhoods where prospective renters or buyers are looking for homes. *See* Margery Austin Turner, "Discrimination in urban housing markets: Lessons from fair housing audits," 3 *Housing Policy Debate* 183-215 (1992).

[49] *See generally* Paul R. Rosenbaum and Donald B. Rubin, "The central role of the propensity score in observational studies for causal effects," 70 *Biometrika* 41-55 (1983). *See also* Alberto Abadie and Guido W. Imbens, "Matching on the estimated propensity score," 84 *Econometrica* 781-807 (2016); Daniel Ho, Kosuke Imai, Gary King, and Elizabeth Stuart, "Matching as nonparametric preprocessing for reducing model dependence in parametric causal inference," *15 Political Analysis* 199-236 (2007); Andrew Gelman and Jennifer Hill, *Data Analysis Using Regression and Hierarchical Models* 208-12 (2007); Peter C. Austin, "Optimal caliper widths for propensity-score matching when estimating differences in means and differences in proportions in observational studies," 10 *Pharmaceutical Statistics* 150-161 (2011).

finding no suitable matches among the untreated. Because of the large sample size in this analysis, there were no unmatched cases in these analyses. In each estimation, a control variable is included as a fixed effect for year in the interval from 2006-2013 when the cases began.

V. RESULTS

Three tests for disparate treatment were conducted. Each shows statistical evidence of discrimination against Black persons in the selection of defendants for Stash House prosecutions.

A. Test 1

The first test shows results of a series of regressions that examine whether race explains selection of suspects for the Stash House Program. Six models were estimated, as described in Part IV of this Report. The results are shown in Tables 5.1 and 5.2. The results show that after controlling for criminal propensity, race remains statistically significant, meaning that the ATF is selecting defendants on the basis of race. In other words, Black status is a significant predictor of selection as a Stash House defendant after controlling for both formal and informal but articulated ATF criteria and other criminal propensity scores.

Table 5.1 shows the results of the logistic regressions for the defendants. Model 1 estimates the effects of Black race alone on selection as Stash House defendants compared to the pool of potential eligibles. Race is significant: Blacks are significantly more likely than Whites or Hispanics to be selected as a Stash House defendant. Model 2 estimates the same probability, this time with separate predictions for Black and Hispanic (60%) defendants. Again, Blacks are significantly more likely to be selected as a Stash House defendant compared to Whites, but Hispanics are not significantly more likely to be selected as a defendant. Model 3 adds demographic characteristics of the defendant. The results for the race and ethnicity variables remain the same, although the size of the coefficient for Black defendants is somewhat smaller (1.217 compared to 1.020).

Model 4 adds a block of predictors that measure the effects of the ATF Criteria (as stated in the ATF Manual). Black status is again significant, and again, the size of the coefficient is reduced to 0.903. Again, Hispanic status is not a significant predictor. Model 5 adds additional criminal history variables. Important in this block of variables are the predictors for prison sentences and jail sentences, proxies for the seriousness of a criminal career and also for criminal propensity. Again, Black status is significant, but Hispanic status is not. Blacks again are more likely to be selected for the Stash House

Table 5.1. Logistic Regression Results (Defendant N = 94)

	Baseline	Add Hispanic Variable	Add Demographic Variables	Add ATF Manual Variables	Add Other Criminal History Variables	Add Post-Hoc Variables
	1	2	3	4	5	6
Black	1.093***	1.217***	1.020***	0.903***	0.956***	0.852**
	(0.252)	(0.323)	(0.327)	(0.338)	(0.349)	(0.357)
Hispanic (60%)		0.298	0.157	0.080	0.179	0.068
		(0.449)	(0.450)	(0.452)	(0.463)	(0.470)
Female			-	-	-	-
Log of Age at First Arrest			-1.523***	-0.886*	-0.253	0.227
			(0.557)	(0.538)	(0.640)	(0.669)
Log of Age			0.048	-0.309	-1.318***	-1.622***
			(0.300)	(0.323)	(0.469)	(0.479)
Log of Arrests for ATF Manual Violent (UCI				0.081	0.074	0.051
				(0.054)	(0.054)	(0.053)
Log of Convictions for ATF Manual Violent				0.032	0.038	0.025
				(0.044)	(0.046)	(0.046)
Log of Arrests for ATF Manual Violent (Exp				0.056	0.001	0.017
				(0.059)	(0.059)	(0.063)
Log of Convictions for ATF Manual Violent				-0.075	-0.089	-0.078
				(0.061)	(0.061)	(0.062)
Log of Number of Prison Sentences					0.257***	0.247***
					(0.055)	(0.056)
Log of Number of Jail Sentences					0.000	-0.007
					(0.050)	(0.052)
Percent of Arrests by CPD					-0.216	-0.301
					(0.283)	(0.307)
Log of Arrests for Weapons						0.136**
						(0.055)
Log of Convictions for Weapons						0.036
						(0.060)
Log of Arrests for Drug Sale						-0.013
						(0.063)
Log of Convictions for Drug Sale						-0.015
						(0.068)
Log of Arrests for Drug Possession						0.058
						(0.059)
Log of Convictions for Drug Possession						-0.045
						(0.056)
Log of Arrests for Marijuana Sale						0.090
						(0.064)
Log of Convictions for Marijuana Sale						-0.291*
						(0.156)
Log of Arrests for Marijuana Possession						0.036
						(0.049)
Log of Convictions for Marijuana Possession						-0.028
						(0.078)
Constant	-10.763***	-10.886***	-6.236***	-6.682***	-4.723***	-5.592***
	(0.344)	(0.405)	(1.325)	(1.355)	(1.630)	(1.893)
Observations	2,047,752	2,047,752	1,742,793	1,742,793	1,742,793	1,742,793
Pseudo R-squared	0.0274	0.0276	0.0332	0.0373	0.0509	0.0610
Year FE	YES	YES	YES	YES	YES	YES
SE Clustered at SID Level	YES	YES	YES	YES	YES	YES

Significance: *** = p < .01; ** = p < .05; * = p < .1

Notes:

[1] Robust standard errors are in parentheses.

[2] For cells populated with a "-", observations with this characteristic have been dropped as a result of the estimation methodology.

Program, after controlling for several criminal history variables. In Models 1-5, Black status is significant at the p <.01 level.[50]

Model 6 adds several predictors that were identified through statements made in court, in other memoranda and documents, and other public utterances. Again, Black status is a significant predictor of selection into the Stash House Program, although significance here is slightly lower: p < .05. Hispanic status is not. In Models 5 and 6, the number of prior prison sentences also is significant. It is important to remember in this test that the population of Hispanic defendants was based on the results of the Hispanic Surname analysis, using a 60% probability threshold. As discussed before, Hispanic ethnicity was verified for the defendants. Table 5.2 shows the results of those analyses, showing only the regression coefficients and standard errors for the race and ethnicity predictors for potential eligibles for both Hispanic (60%) and Verified Hispanic.

Table 5.2. Summary and Comparison of Logistic Regression Results with Estimated Hispanic (60%) and Verified Hispanic

	Null	Add Hispanic Variable	Add Demographic Variables	Add ATF Manual Variables	Add Other Criminal History Variables	Add Post-Hoc Variables
	1	2	3	4	5	6
Table 5.1 (Defendant N = 94)						
Black	1.093***	1.217***	1.020***	0.903***	0.956***	0.852**
	(0.252)	(0.323)	(0.327)	(0.338)	(0.349)	(0.357)
Hispanic (60%)		0.298	0.157	0.080	0.179	0.068
		(0.449)	(0.450)	(0.452)	(0.463)	(0.470)
Table 5.1 with Verified Hispanic (Defendant N = 94)						
Black	1.093***	1.535***	1.339***	1.226***	1.300***	1.204***
	(0.252)	(0.372)	(0.380)	(0.391)	(0.400)	(0.408)
Hispanic (60%) Plus Verified Hispanic		0.904**	0.765*	0.690	0.802*	0.700
		(0.456)	(0.453)	(0.458)	(0.469)	(0.478)

Significance: *** = p < .01; ** = p < .05; * = p < .1

Notes:

[1] Robust standard errors are in parentheses.

[2] All models are run with the same covariates, year FE, and SE clustering as Tables 5.1

The results in Table 5.2 show some changes when the verified Hispanic population is included. Overall, there now is a substantial shift in the size and statistical significance

[50] The significance level means that this is not a chance occurrence, and that it would recur if a similar test were conducted in more than 99% of the tests under the same sampling and measurement conditions. In technical terms, it means that the probability of rejecting the null hypothesis – in this case, that there is *no* race or ethnicity effect in selecting defendants for fictitious Stash House stings – is 99%. For the seminal discussion on statistical significance and its meaning, *see* Ronald A. Fisher, *Ronald A. Statistical Methods for Research Workers 43* (1925).